

RADITEK

SATCOM

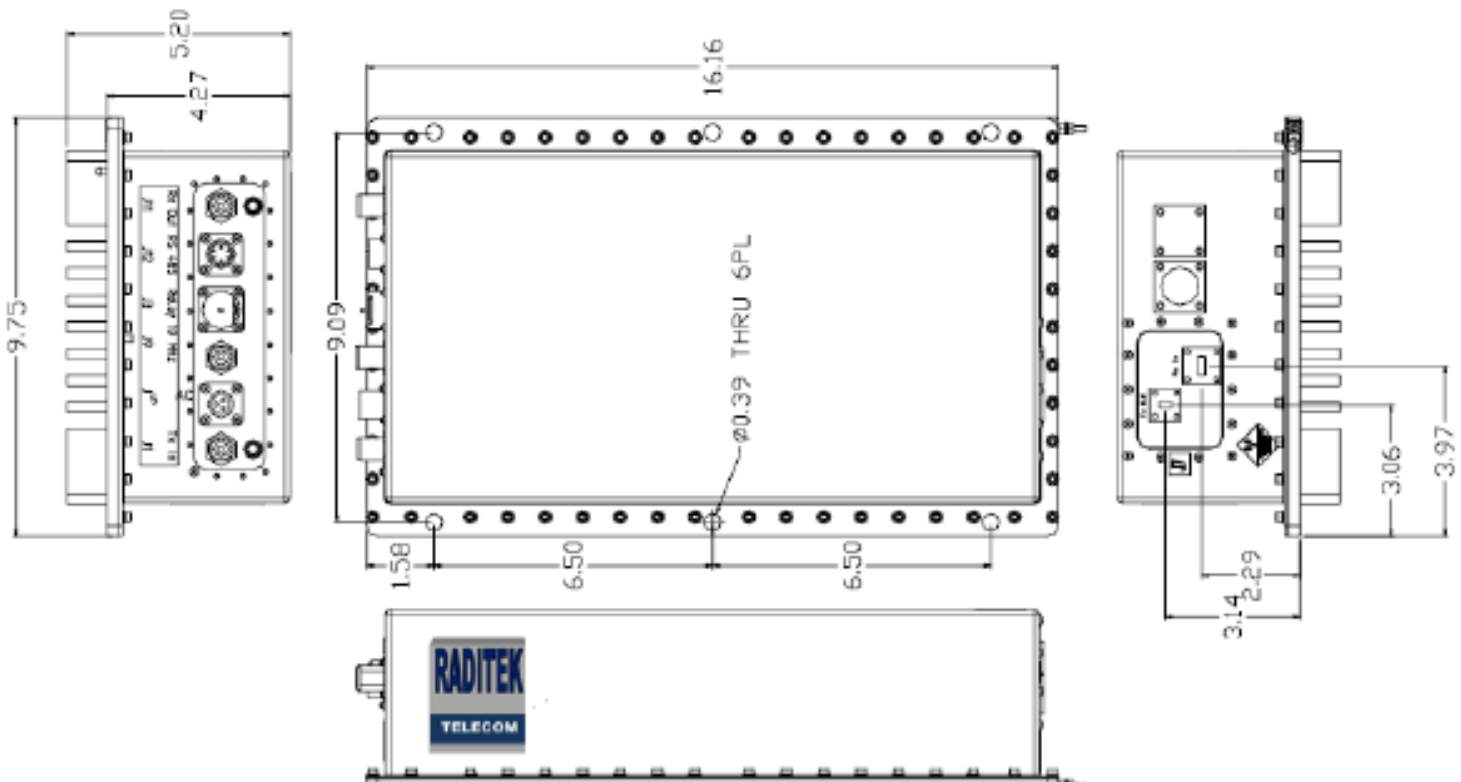
Ka Band Transceiver

Ka Band Transceiver, 0dBm RTR-Ka-70m-N-0dBm-j4



FEATURES

- ❖ Easy to Install and Operate
- ❖ Compact Light Weight Design
- ❖ Weatherproof Package
- ❖ Rx / Tx Temperature Gain Compensated
- ❖ Rx / Tx 20dB Attenuation Setting
- ❖ 125 kHz Step
- ❖ High Stable Phase-Locked Converters
- ❖ Superior Phase Noise
- ❖ Running with Internal Reference in Absent of External MHz Reference
- ❖ Built-In Image Reject Filter (50dB)
- ❖ Remote Monitor & Control (RS485)
- ❖ Discreet Alarms
- ❖ Alarm LED Display for Tx and Rx
- ❖ Rx / Tx Mute
- ❖ 90 – 264 VAC Input
- ❖ Shutdown Protection Against Thermal Runaway and Out of Lock Conditions



Ka-Band Transceiver, 0dBm RTR-Ka-0dBm-j4

Transmit

Power 0 dBm	P1dB min. +10 dBm	Gain min. 40 dB At max. gain setting
-----------------------	-----------------------------	--

IF input

Frequency range	70 ± 18 MHz
Input Level	-30 to -10 dBm
Input Connector	Type N female
Connector Impedance	50 Ω
Input VSWR	1.3: 1 max. at 50 Ω

RF output

Frequency range	30.00-31.050 GHz
Output connector	WR28
Output power (P1dB)	+ 10 dBm min.
Connector Impedance	50 Ω
Output VSWR	1.3:1 max.

Gain specification

Attenuator range	20 dB
Attenuator step size	0.1 dB
Gain flatness	2.0 dB P-P max. 36 MHz
Gain stability	±1.5 dB max. -40°C to +55°C
Intermodulation Product (IMD3)	-26 dBc (2 carriers each at 6 dB back-off from P1dB)

Spurious.
Synthesizer step size

Frequency stability

-30°C to +55°C	+/-2 x 10 ⁻⁸ / day
Aging	+/-1 x 10 ⁻⁷ / year

Phase noise

Offset frequency	Phase noise
100Hz	-63 dBc/Hz max.
1000 Hz	-73 dBc/Hz max.
10 KHz	-83 dBc/Hz max.
>100 KHz	-93 dBc/Hz max.

Monitor & Control

Serial port (RS-485)	MS3112E10-6P
Serial port (RS-232)	MS3112E10-6P

Receive

RF Input

RF Input Frequency	20.2 - 21.2
RF Input Interface	WR42
Input VSWR	1.3: 1 max at 50 Ω

IF Output

Frequency range	70 ± 18 MHz
Output Level	+10 dBm at P1dB
Output Connector	Type N female
Connector Impedance	50 Ω
Output VSWR	1.3: 1 max at 50 Ω

Gain specification

Gain	40 dB min.
Maximum input level	-30 dBm
Attenuator range	20 dB
Attenuator step size	0.1 dB
Gain flatness	2.0 dB P-P max. 36 MHz band

Gain stability	±3.0 dB max. -40°C to +55°C
Noise Figure	10 dB
Spurious	-55 dBc
Image Rejection	60 dB
Synthesizer step size	125 kHz

Frequency stability

-40°C to +55°C	+/-2 x 10 ⁻⁸ / day
Aging	+/-1 x 10 ⁻⁷ / year

Phase Noise

Offset frequency	Phase noise
100Hz	-63 dBc/Hz max.
1000 Hz	-73 dBc/Hz max.
10 KHz	-83 dBc/Hz max.
>100 KHz	-93 dBc/Hz max.

External reference (option)

External ref. connector	10 MHz type N
-------------------------	------------------